

# PAPER

## STEPS on campus

### 9 Steps to Protecting the Climate and Reducing Waste through Campus Paper Policies



BROUGHT TO YOU BY

A PARTNERSHIP WITH NATIONAL  
WILDLIFE FEDERATION, RECYCLING  
ORGANIZATIONS OF NORTH AMERICA,  
AND THE REPAPER PROJECT.

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# SUMMARY

## Green Your Campus through Smart Paper Policies!

Campuses across North America play a pivotal role in creating and demonstrating successful sustainability programs to be emulated across society. When it comes to recycling of vital resources, which is necessary to protect the climate and reduce waste, campuses make a huge impact. Paper is one of those necessary resources. But unfortunately, it is often overlooked. However, the way we manufacture, use, dispose of, and purchase paper can have dramatic impacts on the global climate, and the overall sustainability of our lifestyle.

As a student leader or campus administrator, you use high-quality paper frequently - making you a key driver in an effort to boost the manufacturing and use of recycled paper. Happily, many higher education campuses are already leading the way with their institutional paper policies! This guide highlights some of those successes. There are many more out there still, not mentioned here, that we hope will multiply exponentially with the assistance of educational resources such as this one.

Though steady progress has been made, we still have a long way to go. Today in the United States only 50% of office paper is recovered for recycling. The majority of the rest is lost to landfills or incinerators. This is not only a significant waste of a valuable resource, it is drastically adding to our global pollution problem, especially since audits conducted on campuses have shown that the waste stream is made up of 40% to 50% paper and paper product waste.

The paper your campus purchases also plays a critical role. According to [State of the Campus Environment](#), a National Wildlife Federation (NWF) report, 47% of campuses surveyed have set goals to improve purchasing

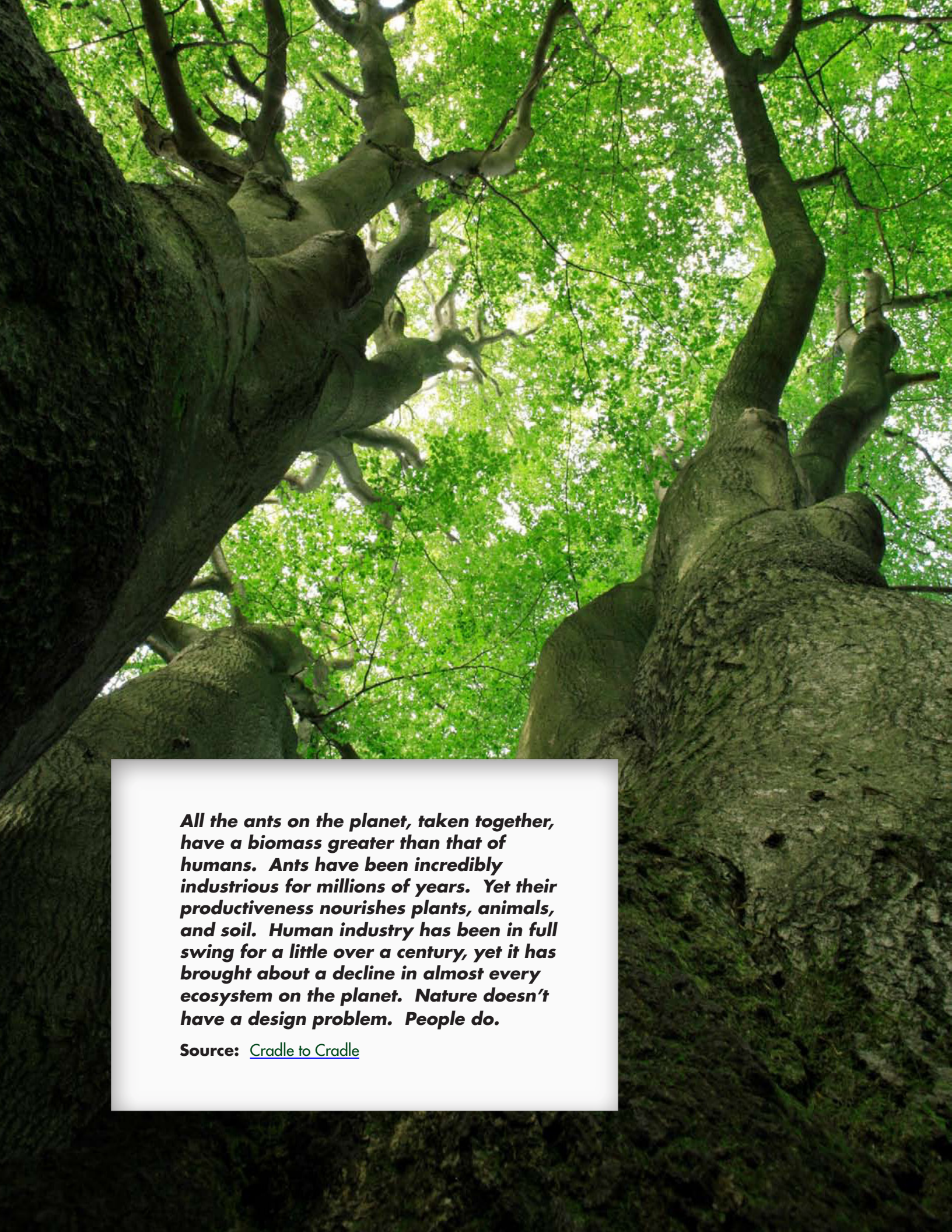
environmentally sound goods. Environmentally-conscious purchasing can result in less waste, increased cost-saving measures, energy conservation resulting in positive climate change, and an overall awareness on campus of the necessity to conserve and reduce. A new website, [Whatsinyourpaper.com](#), highlights a list of environmentally preferred paper and tips to find the perfect environmental paper for your every need.

In summary, to create the greatest impact in climate protection, waste reduction, and cost savings it is imperative that institutional paper policies reflect significant advancement toward recovering the majority of used office paper for efficient and effective recycling, reducing the overall consumption of paper and paper products, and purchasing the highest content recycled paper possible for your campus. Campus leaders across North America play a pivotal role in protecting our planet. With your help, it is possible to create and support a paper industry that helps the planet and its population, rather than harms it.

## WHY PRIORITIZE OFFICE PAPER RECYCLING?

Currently, only approximately 50% of office paper is being recovered for recycling. On top of that, Printing and Writing papers only contain an average of 6% recycled content, just 3% being post-consumer. By prioritizing office paper recycling, we are able to create the greatest climate and environmental savings. The reason being that manufacturing Printing and Writing papers usually requires a highly resource intensive process called kraft pulping, which uses more energy and more chemicals in the process. By increasing the recovery of office paper for recycling, and thereby the recycled content in Printing and Writing papers, we can create a dramatic reduction of climate and environmental impacts from manufacturing paper.





***All the ants on the planet, taken together, have a biomass greater than that of humans. Ants have been incredibly industrious for millions of years. Yet their productiveness nourishes plants, animals, and soil. Human industry has been in full swing for a little over a century, yet it has brought about a decline in almost every ecosystem on the planet. Nature doesn't have a design problem. People do.***

**Source:** [Cradle to Cradle](#)



# one

**STEP**

## The Paper Point Person

As you might imagine, the first necessary step for your campus is to appoint or create a primary contact person, set of people, or organization, to coordinate campus decisions about paper use, recycling and purchasing.

If your campus already has an active Office of Recycling/Sustainability, ensure that there is a person in that office that is interested and willing to make paper issues a priority for the campus, and an issue where they are able to develop expertise.

An important component of this person's role is to coordinate communication between administration and students about recycling, paper use reduction, recycled paper purchasing, and education.

14% of campuses surveyed in [Campus Environment 2008](#) report to having a green purchasing coordinator or manager, up from 7% in 2001. And 36% have plans to name one.

***The recycled paper industry creates 5 times as many jobs as the virgin paper industry.***

Source: [WorldCentric](#)

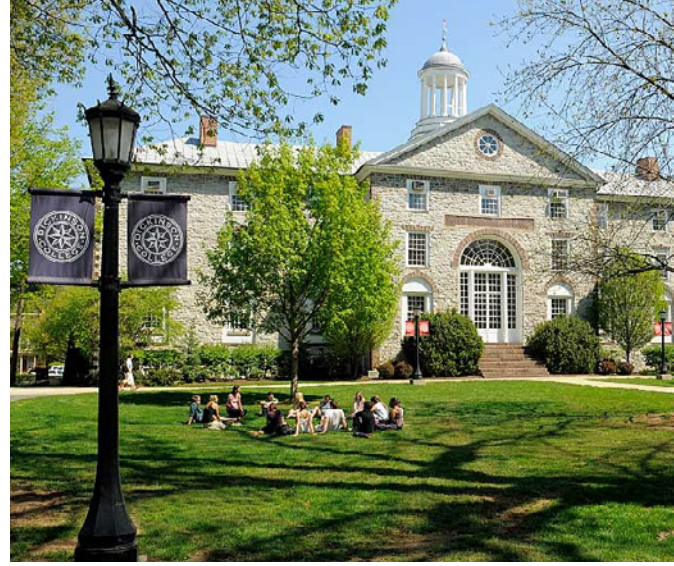
### **The point person for your campus could be found in the following places:**

- A. Recycling Office
- B. Sustainability Office
- C. Student Group concerned with environmental/sustainable issues
- D. Student volunteer
- E. Work study student
- F. Student Government position
- G. Campus Waste Management
- H. Campus Facilities

# CASE STUDY

## Dickinson College

Location: Carlisle, Pennsylvania / Enrollment: 2,365 / Type: Private



Dickinson's sustainability policy addresses green building, sustainable landscaping, energy efficiency, water conservation, and waste reduction. Two committees and eight full-time staff work to advance sustainability efforts. A green purchasing policy mandates the purchase of Energy Star appliances, recycled paper, green cleaning products, and EPEAT (Electronic Product Environmental Assessment Tool) -registered electronics.

### Dickinson's Sustainability Task Force

To date, one of the most exciting institutionalized commitments to sustainability has been the adoption of the Commission on the Environment's [Sustainability Proposal](#) into the College's Strategic Plan. Environmental sustainability and accountability is now a key part of what it means to be "Distinctly Dickinson!"

President Durden appointed a 23-member Sustainability Task Force—comprised of students, faculty and staff from all corners of campus—which met three times in October with the following goals:

- To commit the College Community to a more sustainable future;
- To improve sustainability behaviors on campus – elevating Dickinson to the status of responsible consumer;
- To reduce pollution generated by the College;
- To preserve natural resources;
- To create meaningful real life living and learning moments for our community regarding sustainability;
- To develop ideas and initiatives to reduce utility consumption and costs.

This Task Force presented a [report](#) to the President's Staff that recommended the immediate adoption of multiple all-campus sustainability initiatives. Although more than eighty sustainability ideas were identified, the general nature of these thoughts focused on simple, everyday behaviors: shutting off light fixtures when not in use, installing energy-efficient appliances, and most importantly, increasing sustainability education efforts at Dickinson to create a campus culture devoted to sustainability.

**Source:** <http://www.dickinson.edu/departments/sustainability/plan.html>

# CASE STUDY

## Butler Community College

Location: El Dorado, Kansas / Enrollment: 9,555 / Type: Public

Sustainability is a goal that Butler Community College has been working on since April 2009.

The very first meeting of the college's Sustainability Committee designated leaders of sub-teams to help fight waste and pollution. Representatives from Butler, students and local experts gathered to share ideas and brainstorm on methods to help the environment. Ed Arnold, Butler facilities director, is spear-heading the effort.

Arnold explained that he had accomplished some research over the summer as a starting point and wants to form teams to assist with individual projects that may develop. Climate protection was one of the first topics the committee discussed. Arnold said that he had sent an RFP, request for proposal to four companies to perform a Greenhouse gas (GHG) inventory and carbon foot print. A climate action plan was also discussed and the information provided by the GHG inventory will help the committee form a more solid and number driven plan.

Gaining ground toward environment neutrality is a focus for the group and Arnold said they need to work on developing strategies to get to a more neutral position.

Energy conservation, explained Arnold, would involve adjusting heating and air to promote conservation and the college has already taken steps toward that goal.

Organizing an awareness program will also be vital for the group's goals. Butler has recently taken on a massive amount of construction with the Welcome Center and renovations of other buildings and Arnold used the Welcome Center as an example of how 'green construction design' can also help.

Arnold emphasized ethics in all areas. "You would be amazed to find out how much recyclables are still going to the dump," he declared. Arnold went to the trash can in the Gold Room and picked out a recyclable plastic drink bottle to drive the point home to the group.



Recycle Mania is an event the committee wants to promote that involves schools reporting recycling and trash data which are then ranked according to who collects the largest amount of recyclables per capita, the largest amount of total recyclables, the least amount of trash per capita, or have the highest recycling rate over a ten week period. With each week's reports and rankings, participating schools watch how their results fluctuate against other schools and use this to rally their campus communities to reduce and recycle more.

**Source:** [Sustainability Committee rallies at Butler for first meeting](#)

# two

STEP

# 2

## Paper Efficiency Policy

Paper use efficiency is an important piece of sustainability. With the amount of energy and natural resources that go into manufacturing paper, it is critical that we use this resource wisely.

Paper is an extremely important, yet costly purchase for a campus. Even so, paper is largely wasted, often unintentionally. Currently over a quarter of the content in our municipal landfills is paper. And some waste audits conducted on campus show paper closer to 50% of the waste stream.

Explore opportunities to enact a campus-wide policy that sets goals for paper use reduction. Start with a goal of reducing paper use by 25% and see how easy it is to meet that goal!

***Just 10% of the world's population (Western Europe and North America) consumes more than 50% of the world's paper.***

Source: [Shrink](#)

## TIP:

Along with policy implementation, visual demonstrations can be very effective at making a point and showing how and why paper use reduction is possible. For example, to build support for your paper reduction policy, consider creating a visual display in the library or computer lab that piles up all of the unclaimed paper that students print but don't pick up.





## Ideas for Paper Efficiency Policy Language and Implementation:

- A. Every department institutes a policy that all documents printed on campus must be printed on both sides before it is recycled
- B. Every campus department printer has a sign posted reminding users to print on both sides, and all campus printers have a default set up to print on both sides
- C. Every campus department requires all university email correspondence to have a statement, such as the one below, after each signature:

 **Before printing this e-mail, assess if it is really needed**

- D. Every campus department budgets for a software printing program to help faculty and staff reduce paper use, such as 'FinePrint'. <http://www.fineprint.com/> or GreenPrint – [www.greenprint.com](http://www.greenprint.com). With FinePrint, it claims you can cut paper, ink and printer costs by at least 30%. FinePrint costs approximately \$50 (per license) to purchase. Spend time researching to determine which program suits your campus best.
- E. Every campus department selects a paperless fax program, such as GreenFax – [www.greenfax.com](http://www.greenfax.com)
- F. Every campus department personal computer has installed a FreePDF XP - <http://freepdf-xp.en.softonic.com/>. FreePDF XP offers a free alternative that does a good job of making PDF files complete with password protection. As a result, you can use the program to save files from a number of formats into printable format, including Word documents, Excel spreadsheets, pictures or Web pages.

# ABOUT

## SHRINK

Join an international movement to use less paper! Sign the pledge on your campus' behalf on [Shrink.org](http://Shrink.org) and be part of 10's of 1000's of individuals, businesses, governments, and schools committing to reduce paper use.

Since the 1960s, world consumption of paper has quadrupled and use of printing paper has increased six-fold. Yet much of this paper use is wasteful and unnecessary and it is linked to human rights abuses, forest destruction, pollution and climate change emissions.

Lots of paper is thrust upon us by companies without us asking for it: just think of junk mail and packaging. Shrink is challenging big corporate paper users to follow your example by matching or exceeding the paper reductions of the pledges made on this website. So by pledging to use less paper you will not only reduce your own impact directly, you will help Shrink lobby the biggest paper wasters in our society to reduce their paper use as well.



# CASE STUDY

## Carleton College

Location: Northfield, Minnesota / Enrollment: 1,986 / Type: Private

Carleton focuses foremost on reducing the amount of waste that its campus produces, both through official campus operations, and from day-to-day faculty, staff, and student habits. Some waste is unavoidable and Carleton has pursued both simple and innovative ways to re-use, recycle, and compost everything possible.



### Paper Reduction Program

**Duplex printing:** ITS (Information Technology Services) has set every lab printer on campus to automatically print duplex (some office printers still print one-sided), which effectively halves the number of printed pages.

**Go-Print Printer Program:** Printing remains free and unlimited at Carleton, but all print jobs from labs must be affirmed and authorized with a Carleton ID card. This process eliminates accidental print jobs and unneeded duplicates. It goes without saying printing now requires a little more motivation as well. Go-Print reduced printer page use by ~30% (within a short time-frame).

**Paperless Transactions:** Most offices on campus transfer and complete as much paperwork online as possible. Examples include:

- Human Resources
- Business Office: Online time sheets for all campus employees/student workers.
- Facilities/Custodial Department: Online work orders.
- Admissions: Nearly all New Student mailings in 2008 were done via email.
- Registrar's Office: Online registration since at least 2003

**Source:** <https://apps.carleton.edu/campus/sustainability/initiatives/waste/>



# CASE STUDY

## University of Notre Dame

**Location:** Notre Dame, Indiana / **Enrollment:** 11,603 / **Type:** Private

In response to requests by many faculty and staff, the University has adopted a policy to limit the distribution of mass mailings through Campus Mail Services. Under the new policy, Campus Mail will only accept up to 300 of the same item within a one month period. This policy will apply to all mailings except those mandated by regulatory compliance or those that receive an exception approval from the Office of Sustainability.

This policy is designed not to reduce campus communications, but rather to streamline it through existing channels, thereby reducing printing costs and paper use. These channels include: [inside.nd.edu](http://inside.nd.edu), the University calendar at [agenda.nd.edu](http://agenda.nd.edu), ND Works, the Observer, and the list-servs. Staff is encouraged to utilize these tools and to include links to their department website where staff can post PDFs, online forms, and other materials they wish to make available.

By sending up to 300 items through campus mail, departments will be able to distribute one poster or other communication item to every academic and administrative unit, which can be shared with the members of that department by being displayed in a common area. Posters hung in common areas will likely be retained and read for a much longer time period than individual postcards.

In addition to the many requests for such a policy from individual faculty and staff and from focus groups of key stakeholders, the results of ImproveND 2009 also indicated broad campus support for “dramatically reducing campus mail advertisements and flyers.” Prior to proposing this policy, the Office of Sustainability conducted an audit of all mass mailings sent on campus from December 2008 through May 2009, which indicated that this policy will save the University over \$100,000 each year in printing costs alone.

**Source:** [New mass mail policy reduces waste](#)



# STEP three

# 3

## Recycled Paper Purchasing Policy

A strong campus-wide paper purchasing policy does wonders for supporting recycled, and therefore protecting the environment and the climate. By driving the demand for recycled paper products, and supporting the recycled market, campuses can make a significant impact. Be careful to commit to what you can truly afford to buy, and follow through with your commitment. Following through is one of the most important pieces of the policy, because it clearly demonstrates a growing market trend for a high content post-consumer office paper.

On the next page you'll find a model policy to use on your campus either as is, or edited to best suit your campus' needs. Please also view [NWF's Campus Ecology Paper and Wood Procurement Toolkit](#) to help design the best purchasing policies for your campus.

***World demand for paper is expected to rise 25% by the year 2020.***

**Source:** [Confederation of European Paper Industries](#)

## TIP:

**When Selecting Paper,  
Consider the 3 Most Significant Factors:**

1. Post-consumer recycled content;
2. Bleaching classification, and
3. Source of the original raw material.

# MODEL PAPER PURCHASING POLICY for Your Campus

Paper plays a key role in [Your School]’s operations. We are concerned about the future of the world’s forests and the environmental impacts of paper production. We are therefore committed to purchasing, using, and disposing of paper in ways that protect endangered forests and their associated biodiversity, reduce pollution, and minimize waste.

By developing a comprehensive paper policy, [Your School] is making a commitment to implement and track results of our paper efficiency and procurement strategies by:

**1. Maximizing Recycled Content** by buying products with the highest postconsumer recycled content feasible for each specific need, but no less than the U.S. Environmental Protection Agency (EPA) minimums for federal agencies.

**2. Choosing Responsibly-Sourced Fiber** by purchasing products that originate from sustainably managed forests and are certified by independent, third-party organizations, with preference given to those certified by the Forest Stewardship Council.

**3. Supporting Cleaner Production Practices** by selecting products that are processed without chlorine or chlorine compounds and giving preference to suppliers and manufacturers using renewable energy.

**4. Spreading the Word** by producing an annual sustainability report and posting information on our paper policy and practices on our website, and promoting responsible paper use in publications as appropriate.

[Your School] supports the goals set forth in the Environmental Paper Network’s (EPN) *A Common Vision for Transforming the Paper Industry: Striving*

*for Environmental and Social Responsibility.*<sup>1</sup> [Your School] pledges to work with stakeholders – including the environmental community, suppliers, and other institutional purchasers – to increase the demand for environmentally preferable paper and to encourage the paper industry to meet these goals.

## **1. Maximizing Recycled Content**

Purchasing recycled-content paper and paper products has far reaching environmental benefits and will encourage suppliers to increase their capabilities in providing these products. To maximize the recycled content in paper and paper products, [Your School] will:

- Purchase and source paper and paper products that contain the highest postconsumer recycled content feasible for each specific need, but no less than the U.S. Environmental Protection Agency (EPA) minimums for federal agencies.<sup>2</sup>
- Set a timeline for increasing the postconsumer content in purchased paper products as quickly as possible to higher percentages.
- Give preference to paper and paper products whose postconsumer recycled content is verified by an independent, third-party organization, such as the Forest Stewardship Council.
- Give preference to paper and paper products that also contain other recovered materials (e.g. preconsumer recycled content, agricultural residues, etc.) after maximizing post-consumer recycled content.

<sup>1</sup> For more information on the Environmental Paper Network’s consensus criteria, see *A Common Vision for Transforming the Paper Industry: Striving for Environmental and Social Sustainability* at [www.environmentalpaper.org/documents/CommonVision-treatise.pdf](http://www.environmentalpaper.org/documents/CommonVision-treatise.pdf).

<sup>2</sup> For more information on federal minimum recycled content standards, see the Comprehensive Procurement Guidelines and Recovered Materials Advisory Notices at [www.epa.gov/epaoswer/non-hw/procure](http://www.epa.gov/epaoswer/non-hw/procure).

## 2. Choosing Responsibly-Sourced Fiber

[Your School] supports responsible forest management practices that protect biodiversity, ecosystem integrity, and long-term benefits to communities. To promote the use of responsibly-sourced fiber in paper and paper products, [Your School] will:

- **Verify Supply Origin:** Purchase papers listed on EPN's paper hierarchy when possible.<sup>3</sup> If existing suppliers and manufacturers cannot provide these papers, we will verify with them the source of any virgin fiber content in paper and give preference to suppliers and manufacturers that establish a credible "Chain of Custody" tracking system to reliably identify the origin of fiber sources. We will work with EPN member organizations to assist us with this process.
- **Endangered Forests:** Give preference to paper and paper products guaranteed to be free of fiber that threatens endangered forests. We currently support the definition of endangered forests as outlined in the Wye River Coalition's *Endangered Forests: High Conservation Value Forests Protection – Guidance for Corporate Commitments*<sup>4</sup> and ForestEthics, Greenpeace, Natural Resources Defense Council, and Rainforest Action Network's *Ecological Components of Endangered Forests*.<sup>5</sup> We will consult with environmental experts, including EPN member organizations, for assistance in identifying endangered forests and paper and paper products from these forests.
- **Forest Conversion to Plantations:** Give preference to paper and paper products that can be guaranteed to be free of fibers from the conversion of diverse natural forest ecosystems into plantations. This policy supports the Forest Stewardship Council's criteria specifying November 1994 as the cut-off date for no more conversion of natural forests to plantations.

<sup>3</sup> For the Environmental Paper Network's paper hierarchy, see [www.whatsinyourpaper.org](http://www.whatsinyourpaper.org).

<sup>4</sup> The Wye River Coalition's *Endangered Forests: High Conservation Value Forests Protection – Guidance for Corporate Commitments* is available at [www.environmentalpaper.org/documents/EF-Report.pdf](http://www.environmentalpaper.org/documents/EF-Report.pdf).

<sup>5</sup> ForestEthics, Greenpeace, Natural Resources Defense Council, and Rainforest Action Network's *Ecological Components of Endangered Forests* is available at [http://forestethics.org/downloads/EFDefinitions\\_April\\_2006\\_2.pdf](http://forestethics.org/downloads/EFDefinitions_April_2006_2.pdf).

Wood from forests converted to plantations after November 1994 is unacceptable unless the plantations are being restored to natural forests.

- **Certified Virgin Fiber:** Give preference to paper and paper products with a remaining virgin tree fiber content that is certified by independent, third-party organizations that employ the most environmentally and socially responsible forest management and restoration practices. The Forest Stewardship Council (FSC) is the only acceptable international certification program that meets this guidance.<sup>6</sup> Other certification systems may be considered by [Your School] if their performance-based forest management and chain-of-custody standards meet or exceed FSC's standards; their governance and funding mechanisms are fully balanced, transparent, and independent; and they are widely accepted by environmental and social stakeholders. [Your School] will consult with environmental and other experts, such as EPN member organizations, when evaluating certification systems.
- **Alternative Fibers:** Give preference to paper and paper products made from alternative fiber crops (e.g. hemp, kenaf, etc.) if Life Cycle Analysis and other comprehensive and credible analysis indicates that alternative fibers are environmentally and socially preferable to other sources of virgin fiber.
- **Genetically Modified Organisms:** Buy paper and paper products with fiber content known to be free from genetically modified organisms. This includes transgenically modified trees and plants that have genes of other animals and plants inserted.

## 3. Supporting Cleaner Production Practices

[Your School] supports minimizing the environmental impacts of paper production. To encourage cleaner production practices, [Your School] will:

<sup>6</sup> For more information on Forest Stewardship Council, see: [www.fscus.org](http://www.fscus.org) and [www.fscuax.org](http://www.fscuax.org) (FSC U.S. and international web sites), [www.forestworld.com](http://www.forestworld.com) (certified wood supply database and tracking services), and web sites of certifiers specified on FSC web sites.



- Give preference to paper and paper products processed without chlorine or chlorine compounds (i.e. “processed chlorine free” (PCF) papers), as long as they also meet recycled content goals. [Your School] will set timelines for converting purchases of recycled content paper to PCF.
- Choose paper with the minimum brightness suitable for our printing needs to further minimize environmental impacts from paper bleaching.
- Avoid coatings and bright-colored papers whenever possible.
- Give preference to suppliers and manufacturers that use renewable energy to supply electricity for their facilities, either on-site or through the purchase of renewable energy certificates (RECs).<sup>7</sup>
- Use vegetable-based inks (e.g. soy, linseed, corn, etc.) and inks free of toxic or heavy metals whenever possible.

<sup>7</sup> Renewable energy sources include solar, electric, biomass, wind, geothermal, small hydropower, biodiesel, and fuel cells. For more information on renewable energy sources, see [www.green-e.org/ipp/national\\_standard.html](http://www.green-e.org/ipp/national_standard.html).

#### 4. Spreading the Word

[Your School] recognizes the benefit of promoting environmental awareness with our employees, suppliers, customers, partners, and the public. To publicly promote our commitment to using paper efficiently and purchasing environmentally preferable paper, [Your School] will:

- Publish and distribute to all interested stakeholders an annual sustainability report, which will detail progress in implementing this policy and any other activities related to [Your School]’s impact on the environment.
- Post our environmental paper purchasing policy, goals, and achievements on our website.
- Print on documents (e.g. letterhead stationery, envelopes, publications, etc.) an accurate description of the attributes of the environmentally preferable papers used, in order to raise awareness and accountability. Such attributes include, but are not limited to, postconsumer recycled content, bleaching technology (i.e. Processed Chlorine-Free), and any applicable eco-logos or certifications.
- Encourage suppliers to adopt similar paper policies and implement other environmentally and socially responsible practices.

# ABOUT

## AASHE

Association for the Advancement of Sustainability in Higher Education (AASHE) is an association of colleges and universities that are working to create a sustainable future. Their mission is to empower higher education to lead the sustainability transformation. They do this by providing resources, professional development, and a network of support to enable institutions of higher education to model and advance sustainability in everything they do, from governance and operations to education and research.

AASHE defines sustainability in an inclusive way, encompassing human and ecological health, social justice, secure livelihoods, and a better world for all generations.

Please view AASHE’s abstracts for ideas on sustainable purchasing and actions on your campus: <http://www2.aashe.org/conf2008/abstracts.php>



# THE PAPER STEPS

## To Environmentally Responsible Paper

**In the Steps on the next page,  
'Environmental Fiber Attributes' are  
defined as:**

- Post-consumer Recycled Fiber
- Pre-consumer (or deinked) Recycled Fiber
- Agricultural Residue Fiber<sup>1</sup>
- Forest Stewardship Council certified  
and free of Endangered and High  
Conservation Value Forest fiber<sup>2</sup>

**Cleaner Bleaching Production  
Technologies are also included  
in each Step.**

<sup>1</sup> Agricultural residues are residues left over from food production or other processes and using them maximizes the lifecycle of the fiber. Fibers include: cereal straws like wheat straw, rice straw, seed flax straw, corn stalks, sorghum stalks, cotton stalks, cotton linters, sugar cane bagasse, and rye seed grass straw. Where the LCA (life cycle analysis) shows environmental benefits and conversion of forest land to on purpose crops is not an issue, kenaf can also be included here. (Agricultural residues are not from on purpose crops that replace forest stands or food crops.)

<sup>2</sup> Currently, virgin fiber directly from FSC certified forests is the only tree fiber that meets this criteria

## WHAT'S IN YOUR PAPER?

To find a list of Environmentally Improved and Environmentally Superior Papers visit  
[www.WhatsInYourPaper.com](http://www.WhatsInYourPaper.com).



ABOUT



### ENVIRONMENTALLY INFERIOR PAPER

*This paper has no, or very minor, environmental attributes*

#### MEETS NO MINIMUM CRITERIA:

- Has no or minimal recycled content
- Virgin tree fibers not FSC-certified and may be from intact, endangered and or high conservation value forests

### TRANSITIONAL PAPER

*At least 10% of the fiber has environmental attributes and meets the minimum criteria below*

#### MINIMUM CRITERIA:

- 10% post consumer OR FSC Mixed Sources certified<sup>4</sup> OR 10% agricultural residue<sup>1</sup> content
- Virgin tree fibers can not be from controversial sources<sup>5</sup>
- **Bleaching:** Can not be Elemental Chlorine (EC) pulp bleaching process

### ENVIRONMENTALLY IMPROVED PAPER

*At least 50% of the fiber has environmental attributes and meets the minimum criteria below*

#### MINIMUM CRITERIA:

- Minimum 30% post consumer recycled if the paper contains virgin tree fiber
- FSC certification required on papers with more than 50% virgin tree content
- Virgin tree fibers can not be from controversial sources<sup>5</sup>
- **Bleaching:** Must be EECF<sup>3</sup>, TCF, PCF pulping and bleaching processes only; excludes Elemental Chlorine Free (ECF) bleaching

### ENVIRONMENTALLY SUPERIOR PAPER

*All fiber (100%) is environmentally superior and meets the minimum criteria below*

#### MINIMUM CRITERIA:

- Minimum 50% post consumer recycled if the paper contains virgin tree fiber
- Virgin tree fiber can not have controlled wood content<sup>4</sup> or controversial sources<sup>5</sup>
- **Bleaching:** Must be processed Chlorine Free (PCF) or Totally Chlorine Free (TCF)

**Calculate and Build Reports on Your Positive Impact! Use the Paper Calculator at [www.papercalculator.org](http://www.papercalculator.org)**

**1** Agricultural residues are residues left over from food production or other processes and using them maximizes the lifecycle of the fiber. Fibers include: cereal straws like wheat straw, rice straw, seed flax straw, corn stalks, sorghum stalks, cotton stalks, cotton linters, sugar cane bagasse, and rye seed grass straw. Where the LCA (life cycle analysis) shows environmental benefits and conversion of forest land to on purpose crops is not an issue, kenaf can also be included here. (Agricultural residues are not from on purpose crops that replace forest stands or food crops.)

**2** Currently, virgin fiber directly from FSC certified forests is the only tree fiber that meets this criteria

**3** Enhanced Elemental Chlorine Free paper is made using technologies such as oxygen delignification and ozone bleaching prior to bleaching with chlorine dioxide.

**4** FSC paper may contain recycled, FSC certified or Controlled Wood sources. 'Transitional,' 'Improved,' and 'Superior' category papers may

not contain virgin tree fiber from controversial sources. 'Superior' category papers may contain no 'Controlled Wood' sources.

**5** Controversial Sources include Endangered Forests as defined in the Ecological Attributes of Endangered Forests in the Wye Group Report [www.canopyplanet.org/uploads/Wye-EF-Report.pdf](http://www.canopyplanet.org/uploads/Wye-EF-Report.pdf), and those sources dealt with in FSC under the Controlled Wood Standard, including fiber sources from High Conservation Value Forests or Ecosystems, or where there is a risk of illegal logging, violations of traditional or civil rights, ecosystems subject to conversion, or fiber from genetically modified organisms.

- PulpWatch.org provides information on many mills' bleaching technologies and can help identify mills using, ECF, EECF, TCF and PCF technologies.

- The criteria above correspond to the pulp rating system for [www.Pulpwatch.org](http://www.Pulpwatch.org)

- The Paper Steps is based on the Hierarchy of Environmental Papers developed by Canopy, [www.canopyplanet.org](http://www.canopyplanet.org)



# CASE STUDY

## Bates College

Location: Lewiston, Maine / Enrollment: 1,660 / Type: Private

Bates College is committed to sustainability. They are building a sustainable community through outreach and education on important issues like climate change, resource valuation, and conservation. They are providing the tools faculty, staff, and students need to reduce their environmental footprint by conserving energy, promoting renewable energy, alternative transportation, recycling, and green procurement.

### Highlights from Sustainable Bates:

- Bates awarded a "Top Ten" Green Rating by the Princeton Review and EcoAmerica
- B.E.A.M. (Bates Energy Action Movement) hosted the 5th annual Maine State Climate Conference
- Bates signed the American College and University Presidents Climate Commitment, February 2007
- Zipcar and bike share programs available to faculty, staff, and students
- Two new LEED Silver equivalent buildings opened - a residence hall and new dining commons, 2008

Sustainable Bates oversees all environmental initiatives and maintains a comprehensive website. The Committee on Environmental Responsibility, composed of faculty, students, and staff, has been working on an overall

sustainability plan for the college and is responsible for developing a climate action plan.

All paper purchased by the college is Forest Stewardship Council-certified. All college stationary is 100% post-consumer and FSC certified. Copy paper is 30% post-consumer recycled content and FSC certified and all custodial paper products are made with 100% recycled content.

**Source:** <http://www.greenreportcard.org/report-card-2010/schools/bates-college> and <http://www.bates.edu/x166787.xml>





# CASE STUDY

## College of William and Mary

Location: Williamsburg, Virginia / Enrollment: 7,892 / Type: Public

The College of William and Mary's Office of Procurement has decided to switch to copy paper with 75% recycled content as part of a larger effort to make the campus greener and more sustainable. The change was recommended by the Science and Technical Advisory Committee (STAC), a part of the Committee of Sustainability.

STAC chair and biology professor John Swaddle said the change of paper is a result of an ongoing study of greenhouse gas emissions at the College. "As part of that study, we considered the carbon footprint of major items that the College purchases on a regular basis," Swaddle said. "Printer and copier paper is one such major item, so we started to investigate alternatives to our usual paper. The Office of Procurement was very helpful in locating alternatives and quickly honed in on the Navigator paper."

Co-chair Dennis Taylor said there are many environmental benefits to the new paper. "The paper is 75% recycled content, which means that fewer trees are cut and less energy is consumed," Taylor said. "This means the equivalent of a greenhouse gas reduction of about 90 tons per year, forever."

Office of Procurement director Linda Orr said that this greenhouse gas reduction is equivalent to taking 20-30 cars off the road. The Office of Procurement selects options for the College as a whole, so this change will

be made in every unit and department. "The feedback we've got back from individual departments and offices so far has been extremely positive," Swaddle said.

"Copies of all office supply orders are received daily in the Office of Procurement," Orr said. "Departmental staff will be contacted when paper orders for products other than the recycled-content paper are noticed to assure they are aware of the recommended change." Student Environmental Action Committee member and Steering Coalition student representative Philip Zapfel '09 said that while COS made the ultimate decision to change the type of paper used, SEAC students helped in the effort.

"This is part of the broad mission of the Committee of Sustainability set out in President Reveley's sustainability policy last spring, to meet the needs and expectations of the College in a way that allows future generations to meet theirs," Taylor said. "It means finding ways to conserve energy and reduce the environmental impacts of the College's activities. In the long term, we will become more sustainable in our use of resources and will likely do so at less cost as well."

Zapfel said changing to recycled paper is a good start and a necessary step toward an overall green procurement program for the College.

**Source:** [Switch to recycled paper cuts energy consumption](#)

# four

## STEP



## Paper Recovery Policy

In designing or improving your campus recycling program, campuses should keep recovered paper source-separated, meaning that office paper is separate from newspaper, cardboard, and mixed paper. Raw material (i.e. recovered paper) is becoming increasingly expensive for the high-grade deinking mills. Often times, recovered paper that the mills receive tends to be mixed paper or contaminated with non-paper materials. This uses increased energy and labor to sort out, increasing the cost of the end product. Or, worst case scenario, the paper is unusable for the mill and is landfilled. It is imperative that paper mills which produce recycled Printing & Writing paper have a clean fiber source in order to create an uncompromised product. Since campuses tend to use office and printing paper the most, this is in your best interest to collect and keep your office paper source separated. You will also get a higher price for this product when you are able to successfully market your paper to high-grade recovered paper buyers (see Step 6).

The most effective and efficient paper recovery program will keep office paper separate from all the other paper you are recovering. And again, you will most likely find that sorted white paper brings a much higher dollar than mixed paper.

***Only 50% of office paper is recovered for recycling.***

**Source:** [American Forest & Paper Association](#)

Nonetheless, it's important to collect all types of paper for recycling.

**Collect the following:**

- 1. Newspaper**
- 2. Magazines/Catalogues**
- 3. Phone Books**
- 4. Cardboard**
- 5. Colored Paper**
- 6. Envelopes/Direct Mail pieces**
- 7. Text Books**
- 8. Office Paper**

**Campus Environment 2008**

(survey of 1,068 schools) reports:

- 70% of schools recycle higher grades of paper, up from 67% in 2001
- 67% of schools recycle lower grades of paper, up from 57% in 2001
- 65% of schools recycle corrugated cardboard, up from 64% in 2001

## Paper Shredding Challenges

Shredding office paper is a practice that destroys the fibers within the paper, making it difficult to recycle and manufacture new office paper with the shredded fiber. The reason is that shredding cuts the fibers shorter, which makes them weaker, and renders them inefficient for the higher grades of paper. The longer the paper fiber, the higher the grade of paper it can manufacture. Also, the longer the fiber, the more often it can be recycled. (High grade office paper can be recycled up to 8-12 times!) Therefore, most shredded paper must be down-cycled into a different grade of paper product, such as packaging. Shredded paper is rarely accepted by high-grade recycled paper mills, due to the weakened structure of the fibers, as well as the higher degree of contamination.

# IDEAS

## FOR CREATING PRO-RECYCLING POLICY ON SHREDDING DOCUMENTS

- 1.** Only shred the documents that are absolutely necessary. Keep shredding to a minimum.
- 2.** Keep your shredded office paper out of your recovered white paper containers. Instead, put the shredded paper with your packaging and cardboard containers, or keep separate.
- 3.** Don't compost your shredded paper. Check with your local recycling company to find ways to recycle your shredded paper. Some may want it with cardboard or packaging, some may want it separate.
- 4.** For the documents you must shred, set your shredding machine on the largest cut possible – small enough to destroy confidential information, but large enough to keep some fibers intact.
- 5.** Avoid using cross-hatching for your shredding style. This destroys the majority of the paper fibers.
- 6.** If you are using an out of house shredding company, educate them to your needs and wishes as well. Make sure they set their shredding equipment at the largest cut possible.

**Source:** [Eco-cycle](#)

## TIP:

A visual demonstration to inspire a greater effort to recycle is effective and fun to organize. For example, try organizing an annual trash composition study that analyzes how well the school is recycling. This is an effective way to demonstrate effectiveness of the schools recycling program. Dump out all of the garbage bags from all the dorms over the weekend on the college green, and analyze how much of it could have been recycled, paying special attention to the paper. If you do this event for a number of years, the school can collect data and you can broadcast your success. This is an event that attracts a lot of attention from people that walk by, which allows you to raise campus-wide awareness of the issue.  
(Photo Credit: Jeb Wallace-Brodeur, Times Argus)





# CASE STUDY

## Purdue University

**Location:** West Lafayette, Indiana / **Enrollment:** 36,901 / **Type:** Public

Physical Facilities is partnering with buildings across the Purdue University campus to launch a dual stream recycling program. The program - which is being piloted at Freehafer Hall and the Civil Engineering building - will allow faculty and staff to separate office paper from mixed recyclables using a receptacle designed for that purpose. Five additional buildings will be added to the pilot program beginning the week of September 21, 2009.

The dual stream recycling program will meet the long-term goal of maximizing Purdue's recycling rate by the most cost-effective and efficient means. As the program expands across campus, help is needed in this effort. [Learn more now](#) about why separating office paper will be beneficial and how it will work. Check the [Recycling Quick Reference](#) to determine what constitutes office paper, mixed recyclables, and trash.

### Recycling Quick Reference

Office Paper	Mixed Recyclables	Trash
Unbound Non-glossy Neutral Color  Paper clips and staples are OK.	Newspapers/Ads/Inserts Magazines Books/Notebooks Pamphlets/Brochures Glossy/Bright Colored Paper Junk Mail Cardboard (non-corrugated) Cans Plastic	Food Waste Snack Wrappers Liquids Facial Tissues Restroom Paper

**Source:** [http://www.purdue.edu/buildings\\_grounds/recycling/dual\\_stream\\_recycling.htm](http://www.purdue.edu/buildings_grounds/recycling/dual_stream_recycling.htm)





# CASE STUDY

## Wallace Community College

Location: Dothan, Alabama / Enrollment: 3,958 / Type: Public

Wallace Community College students are helping their campus to go green.

Members of Wallace's student government association launched a campaign on Wednesday to recycle paper and another program to collect old cellular telephones and repurpose them for use by military personnel.

While recycling a little paper and a few cell phones won't save the world, the students believe the program will raise awareness and encourage others to adopt more eco-friendly habits.

"Small actions times a lot of people equals a big change," said Chelsea Johnston, a nursing major.

The recycled paper will be collected each month for recycling by the Vivian B. Adams School. The cell phones will be refurbished and given to servicemen and women overseas to use during the holidays. Wallace is also conducting a clothing drive.

Miranda Villamar, Wallace SGA president, said the program actually had career

preparation value to students. Villamar, a history major, said more corporations are seeking to become environmentally friendly, meaning that participation in green programs like a recycling job could be a plus for students entering the work world.

Villamar said that even for people who don't think of global warming or pollution as a big priority, there are some benefits of adopting a more environmentally friendly lifestyle. Villamar said folks can save money by doing a few environmentally responsible things like turning off lights and conserving energy and materials.

"I think it's good for the economy and the environment," said Isaac Thomas, a Wallace student.

Susie Burch, a radiology major, said, "If everybody just chips in a little bit the world will be better in the long run."

**Source:** [Wallace Community College SGA making campus environmentally friendly](#)

# five

## STEP



## Campus Climate Policy

Recovering paper for recycling is an easy, effective way to reduce climate change pollution! It is quick to implement and creates fast results. By ensuring that your school's recovered office paper makes its way back into recycled high-grade paper, you are creating an even greater climate savings due to helping increase recycled content in a very low average recycled content product.

Campuses should ensure that all adopted campus-wide climate or carbon footprint policies include recycling mandates, to help educate people about the link between climate change and waste/recycling. Climate change, or global warming, has become a table talk topic, which is a positive step. However, not everyone understands the connection between recycling and climate change. In fact, there are myths that abound stating that recycling has a greater impact on the climate than using virgin materials. This is simply wrong. Education and action must shed light on the truth. Institutional climate or carbon policies are an effective place to start.

***When paper decomposes in a landfill it releases methane, a climate warming gas 25 times more harmful than CO<sub>2</sub>.***

**Source:** [U.S. EPA](#)

## Resources needed to manufacture virgin paper compared to recycled paper:

Impact Category	1 Ton Virgin Paper	1 Ton 100% Recycled Content	% Reduction by Using Recycled
Wood Use	3 tons	0 tons	100% less wood use
Total Energy	38 million BTU's	22 million BTU's	43% less energy use
Greenhouse Gases	5,690 lbs CO2 equivalent	3,582 lbs CO2 equivalent	37% less CO2 equivalent
Wastewater	19,075 gallons	10,325 gallons	45% less wastewater
Solid Waste	2,278 pounds	1,155 pounds	50% less solid waste

**Source:** [Environmental Defense Paper Calculator 2.0](#)

There are many resources to help you with researching and determining appropriate climate policy language for your campus. (See Notes & Resources section.)

- A. First determine what climate or carbon footprint policy your campus has in place currently.
- B. Next determine the procedural steps necessary to amend the policy, if so needed.
- C. Identify the specific recycling language as it relates to carbon/climate change that you would propose your campus adopt.
- D. Determine the most effective ways to educate your campus leaders about the connection between recycling and the climate, and begin the process to adopt the best language for your campus.
- E. If your campus has no climate policy in place, or being discussed, first develop a team of individuals that will champion climate or carbon policy.

# ABOUT

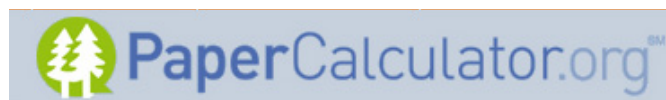
## PAPERCALCULATOR.ORG

Calculate and build reports on your campus' positive environmental impact through using the Paper Calculator!

This tool will help you quantify the benefits of better paper choices. The Paper Calculator shows the environmental impacts of different papers across their full lifecycle.

By using less paper, increasing recycled content, and making other improvements, you can save wood, water and energy, and cut pollution and solid waste.

Create an easy-to-read report, to help your company, community, non-profit or other organization make better paper choices and measure the environmental results.





# CASE STUDY

## Arizona State University, Tempe

Location: Tempe, Arizona / Enrollment: 51,614 / Type: Public

### Carbon Neutrality

Carbon neutrality is the overarching goal of many of Arizona State University's (ASU) campus sustainability initiatives. ASU strives to be a leader in reducing and offsetting its own carbon emissions in order to fight the growing threat of global warming.

ASU President Michael Crow is a leading signatory and chair of the [American College and University Presidents Climate Commitment](#). The Commitment calls for colleges and universities to exercise leadership in their communities and throughout society by modeling ways to minimize global warming emissions and by providing both the knowledge and the educated graduates to achieve climate neutrality.

### Carbon Neutral Strategic Plan

An initial carbon inventory has been completed for the largest campus (Tempe campus), and two other inventories are currently under way. The Carbon Neutral Strategic Plan will be drafted by a structure of appointed committees, however many projects and initiatives in the following seven areas are currently underway: energy, water, buildings and grounds, food services, transportation, **waste and recycling**, and purchasing and policy.

Source: [http://sustainability.asu.edu/campus/carbon\\_neutral.php](http://sustainability.asu.edu/campus/carbon_neutral.php)



# CASE STUDY

## Bristol Community College

Location: Fall River, Massachusetts / Enrollment: 8,700 / Type: Public

### Commitment to Reducing the Campus Carbon Footprint

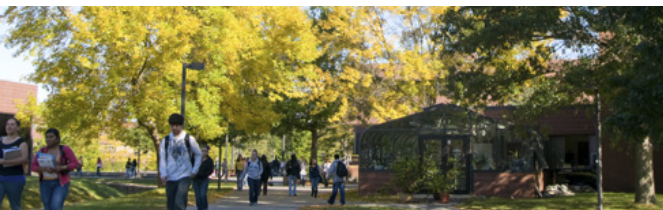
Bristol Community College (BCC) is a signatory of the American College and University Presidents Climate Commitment (ACUPCC). BCC completed a greenhouse gas inventory in 2006 and completed their climate action plan in December 2009. BCC's President John J. Sbrega appointed a sustainability committee to establish the campus's sustainability goals and help the campus meet its ACUPCC commitment. Their sustainability goals follow two main guidelines: 1) assess the operation of the college, finding ways to embed sustainability within the daily work routine and at the same time to reduce its operating costs, and 2) address sustainability through the curriculum, serving the needs of the community by producing degrees and certifications in "green" technologies which will help to fill the growing need for green job technical skills.

The campus's climate action plan has three focuses: transportation, facilities, and operations and policy. Within the operations and policy focus BCC makes the following green purchasing and recycling commitments:

- Establish green purchasing standards, including the purchase of office products, with standards for End of Life Management – Reduce, Reuse, Recycle and "Cradle-to-Cradle" designed products
- Rejuvenate campus-wide recycling efforts
- Participate in RecycleMania
- Set default printer settings for duplex printing

As part of BCC's education and outreach efforts, *greenPRINT* - a print management system and policy, was established. The greenPRINT policy requires students to pay 10 cents per copy for black and white and 25 cents for color once they use their allocation of free prints – allocation amounts are set to an amount that will accommodate the majority of student printing needs. The effort forces students to think before they print and be held accountable for printing more than the average student.

**Source:** <http://acupcc.aashe.org/cap-report.php?id=409> and <http://www.bristol.mass.edu/>



# SIX

STEP



## Marketing Your Recovered Paper

Campuses have a wonderful opportunity to not only recover vast amounts of high-quality paper, but also to get top-dollar for it! How wonderful to successfully market and sell your recovered office paper, and use those earnings to either build onto your recycling program, or purchase environmentally sound materials. Today, while natural resources are diminishing, materials that can be reused or recycled are growing in value. Make the most of it for your campus, and use the earnings to continue to support a sustainable campus.

Be strategic about where your recovered paper goes. This is a very important piece of the recycled paper puzzle. Ensure that the paper you worked so hard to recover and keep clean goes back into the process of manufacturing the highest value paper product possible. Even when recovered material markets fluctuate, sorted high-grade paper typically remains at a high value. Make sure the 'waste' hauler you use is selling this paper to a paper broker or Material Recovery Facility (MRF) that specializes in high-grade fiber. That way, your paper will end up in the deinking mills that will contribute to paper mills manufacturing recycled content Printing and Writing paper. If you determine your hauler is not doing this, renegotiate your contracts as soon as you can to ensure your recovered paper goes back into the proper system.

***World demand for deinked fiber will increase by 2 million tons each year for the next decade.***

**Source:** [Forest Trends](#)

- A. Research what recovered paper can be marketed locally, i.e. – who is buying the materials you are collecting on your campus within your geographic region. This will either be your hauler, the MRF, or an independent paper broker.
- B. Talk to these buyers and determine how much of any particular material they can take, and if you produce enough for what they need, what condition the buyer needs the recovered material in.
- C. If possible, go into a contract with this buyer(s) to ensure you will always get top dollar for your recovered materials.
- D. You may have more than one buyer for all your materials. For example – one buyer may want Old NewsPrint, one buyer may want sorted office paper, one buyer may want Corrugated Cardboard, etc...
- E. For the materials that no one is buying, locate your local Materials Recovery Facility, and make sure they can take what is left.
- F. Keep records of the income you create from selling your recovered paper, and promote the success in quarterly or yearly reports to your campus administrators and students.
- G. Communicate with other colleges and universities in your region. You may be able to work together to market your recovered fiber more successfully due to increased volume.

# ABOUT

## THE FOREST JUSTICE CAMPAIGN

Forest Justice, a campaign of NWF, SustainUS, 350, Focus the Nation, and Union of Concerned Scientists, is working with young people all over the world by providing tools and resources to have an impact on reducing tropical deforestation at the local, national and international level. And to lift up the reality that deforestation is a major contributor to global warming - according to the UN Food and Agriculture Organization, deforestation accounts for over 20% of annual carbon emissions caused by human activity, with paper production accounting for one-fifth of that percentage. Much of the virgin fiber that is used for paper manufacturing is unfortunately still being sourced from endangered or threatened forests outside of the United States and Canada.

There are three campus policies that can have a big impact on reducing tropical deforestation and saving biodiversity:

1. Sustainable Paper Purchasing
2. Recycling
3. Sustainable Wood Purchasing



Get involved in [Forest Justice](#) today and make sure that your campus adopts these critical policies! By becoming part of this growing network you will play a vital role in impacting national and international forest policies.

# CASE STUDY

## Stanford University

**Location:** Stanford, California / **Enrollment:** 14,945 / **Type:** Private

Stanford has a long history of recycling and reuse. Students began the recycling program in 1976, and in 1993 Stanford partnered with its recycling and waste hauler, Peninsula Sanitary Service, to develop a more comprehensive program.

Today, the University's Waste Reduction and Recycling Program is making a significant impact. In 2008, Stanford recycled, reused or composted:

- 5,872 tons of organic material
- 902 tons of glass, metal and plastic
- 2,950 tons of paper
- 202 tons of electronic waste
- 4,758 tons of construction and demolition debris

Stanford paid \$1,272,541 in 2008 for garbage and recycling services. While the cost of recycling was about \$398,610, they saved \$179,280 in landfill disposal fees and earned salvage revenue of \$557,000

### Recycling & Reuse Initiatives

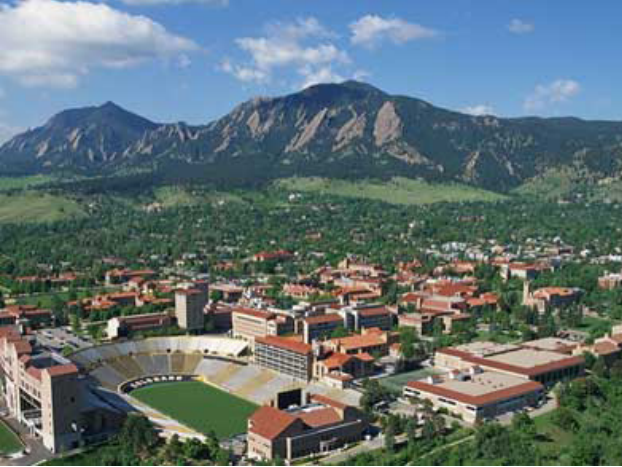
Paper, cardboard, cans, glass and plastics:

These recyclables are gathered in more than 4,000 recycling bins across campus. Undergraduates have bins in their rooms, and the campus provides recycling bins for use in graduate student campus apartments. Stanford is outfitting all public trash cans with recycling receptacles. They recycle film plastics, such as bubble wrap and bags.

**Source:** <http://sustainablestanford.stanford.edu/recycling>







# CASE STUDY

## University of Colorado

Location: Boulder, Colorado / Enrollment: 29,950 / Type: Public

Established in 1976, CU Recycling has become one of the leading campus recycling programs in the country. Its mission is to divert recyclables from the waste stream cost effectively while promoting the benefits of recycling and resource conservation and providing opportunities for meaningful student involvement. In 2009, the Sierra Club ranked CU as the top “green” university in the nation.

After testing a single stream recycling system on campus that mixes all recyclables together in one bin, CU has opted instead for a new “dual stream” recycling system that consolidates multiple types of recycling into two categories and expands the types of acceptable materials. Paper is kept separate from cans and bottles at CU because it is more valuable to the University, helpful for the environment, and beneficial to the recycling industry.

CU’s comparatively high quality paper generates revenue that would be lost if it was mixed in with everything else. These revenues help lower student fees for recycling and can

be reinvested to expand recycling campus-wide. Keeping recyclables separate also means that office paper can be recycled into high quality paper again, and allows higher end uses (like new copy paper) and greater environmental benefit.

CU adheres to the Zero Emissions Research and Initiatives (ZERI) principle of ‘highest and best use’ of recyclables and is concerned about what their recyclables are being remanufactured into. CU is currently working to ‘close the loop’ by marketing its high grade paper to mills that produce fine papers instead of tissue or other paper products.

For more information on CU’s recycling visit [recycling.colorado.edu/cu\\_recycling](http://recycling.colorado.edu/cu_recycling) . To watch a video on expanded dual-stream recycling at CU-Boulder visit [www.colorado.edu/news/](http://www.colorado.edu/news/) and click on the story link.

**Source:** <http://www.greenreportcard.org/report-card-2010/schools/university-of-colorado> and <http://recycling.colorado.edu/>

# seven

**STEP**

## Closing the Loop

Recycled paper manufacturers are having a harder time finding the volume of high-grade recovered fiber they need to boost recycled content in their products. Hence, they are exploring ideas for finding new sources of clean, high-grade paper. As a campus, you have what they need, if you keep your office paper separate from other recovered materials and free of debris or other contaminants.

Explore partnering options with regional high-grade deinking mills, where the recovered

### TIP:

Deinking mills need large volumes of recovered paper to make hauling the paper to the mill worth their while.

Therefore, to be more successful, you should consider contacting all the campuses in your region to be part of the same closed loop system. Even consider including K-12 schools and office buildings to be part of the same closed loop system. This way, there should be enough volume of paper to satisfy the mill, and it will reduce the transportation footprint by having all the paper hauled from a condensed region.

***Making paper out of paper uses 43% less total energy than making paper out of trees.***

**Source:** [PaperCalculator](#)

paper is turned back into clean recycled fiber. (Unfortunately, in the west, there will be less of an opportunity to partner directly with high-grade deinking mills because there are less stand-alone deinking mills in the region.) Determine if these mills are interested in purchasing your recovered paper directly, that way you can potentially avoid the “middle man”, and ensure that your paper will be turned back into the high-grade recycled paper you need on your campus.

You may even be able to negotiate a purchasing contract, if the deinking mill is an “integrated

mill” – where they both deink the fiber and manufacture recycled paper at the same plant – and not only turn your recovered paper back into recycled Printing and Writing paper, but also purchase this paper coming from the same fiber that you recovered! In this way, you are ‘closing the loop’, making sure the paper you are recovering is going into the paper you need on a daily basis at your campus.

Work with organizations such as RONA U, RePaper Project, and NWF (for example) for the resources you need to develop these partnerships and to help promote your success.

**Below are 16 high-grade deinking mills that may be interested in partnering with college campuses:**

## High Grade Deinking Mill Information and Contact

1	American Eagle Paper	1600 Pennsylvania Ave., Tyron, PA	Integrated Facility	Kraft Pulp
2	Appleton Papers Inc	1030 W Alex Bell Road, West Carrollton, OH	Integrated Facility	Kraft Pulp
3	Boise Paper Solutions	4584 Industrial Bypass, Jackson, AL	Integrated Facility	Kraft Pulp
4	Cascades Auburn Fiber	586 Lewiston Junction Rd, Auburn, ME	Non-Integrated Facility	Kraft Pulp
5	Desencrage Cascades	739 rue St-Augustine, Breakeyville , QC	Non-Integrated Facility	Kraft Pulp
6	Flambeau River Papers	Park Falls, WI	Integrated Facility	Kraft Pulp
7	Fox River Fiber	1751 W Matthew Dr., De Pere, WI	Non-Integrated Facility	Kraft Pulp
8	International Paper	34040 Union Camp Dr., Franklin, VA 23851	Integrated Facility	Kraft Pulp
9	International Paper	601 County Road 78, Selma, AL	Integrated Facility	Kraft Pulp
10	FutureMark Paper Company	13101 S. Pulasky Road, Alsip, IL	Integrated Facility	Mechanical Pulp
11	Manistique Papers	453 S. Mackinac Ave, Manistique, MI 49854	Integrated Facility	Mechanical Pulp
12	Mississippi River Corp	30 Major Blvd, Natchez, MS 39120	Non-Integrated Facility	Kraft Pulp
13	Ohio Pulp Mills	2100 Losantiville Ave # 3, Cincinnati, OH	Non-Integrated Facility	Kraft Pulp
14	SFK Pulp Mills	702 Afr Dr., Fairmont, WV	Non-Integrated Facility	Kraft Pulp
15	SFK Pulp Fund	701 4th Ave, Menominee, MI	Non-Integrated Facility	Kraft Pulp
16	New Page	100 North Central Avenue, Duluth, MN	Non-Integrated Facility	Kraft/Mechanical Pulp

**Source:** Environmental Paper Network, [State of the Industry Report](#), 2007

# CASE STUDY

## Boise Paper Company

Location: Jackson, Alabama

The 2008 American Forest & Paper Association (AF&PA) has awarded Boise, Inc.'s Jackson, Alabama paper mill its Business Leadership Recycling Award, which recognizes outstanding school, business, and community recycling efforts.

Boise Jackson processes 120,000 tons of recovered papers each year at its own recycling facility. The mill funds in-school recycling programs in Clarke and Washington counties, providing large blue recycling containers that are placed throughout the counties' schools.

Students at each school assist with sorting and placing paper in the collection containers for pick-up by Boise Jackson. While the program was only fully implemented in the fourth quarter of 2007, five tons of high-quality sorted white ledger paper have already been collected from local schools.

For more than a decade, Boise Jackson employees have visited local schools as part of a Recycling Road Show that provides students with hands-on demonstrations of paper recycling.

Nearly 4,000 students have seen examples of the many different types of paper that can be recycled, learned how the process works, and even had the opportunity to create their own pulp and make a sheet of recycled paper. In recognizing Boise Jackson for its extraordinary recycling efforts, AF&PA President and CEO Donna Harman said, "The program that Boise, Inc. has created at its Jackson facility is an outstanding example of the on-going commitment our members have to paper recycling. It will take innovative and creative programs such as this one to reach the new 60 percent recovery goal set by the industry for 2012."

**Source:** [The Clarke County Democrat – April 2008](#)



# eight

## STEP

# 8

## RecycleMania

RecycleMania is a North America-wide annual event that uses friendly competition between campuses to inspire the greatest amount of recyclable material be recovered. The event began in 2001 and has increasingly inspired more and more campuses to improve their current recycling practices to where now over 500 campuses participate.

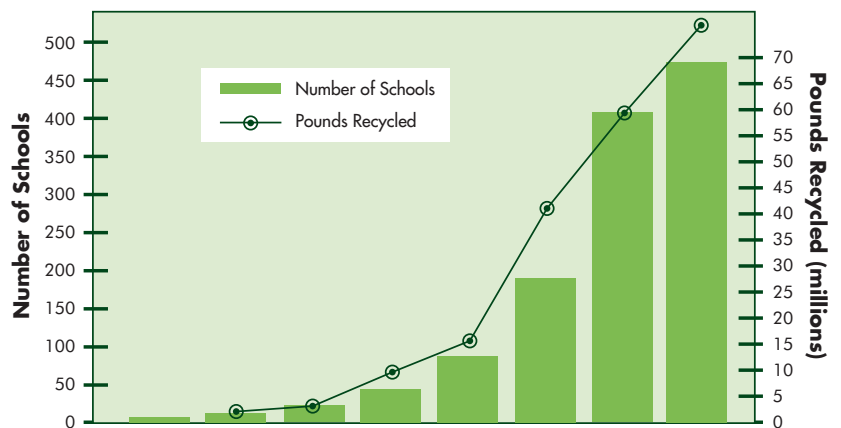
Determine if your campus is already competing in the RecycleMania event. This is a wonderful event to take part in, even if you don't win any prize, because you will learn much more about recycling, your student body, and your administrative services. And, possibly even more importantly, by participating in this event you will be networked with a large number of campuses and will be able to see first-hand how your results grow exponentially through working together with other campuses to contribute to a healthier planet.

### So, it's time to get started!

- A. Identify the RecycleMania coordinating body on your campus
- B. Get your school signed up for the next competition
- C. Use the tools and resources on [RecycleMania website](#)
- D. Have a great time
- E. Improve on every year's success
- F. Commit to yearly participation

***Half of the trees cut commercially around the world end up in paper products.***

Source: [Shrink](#)



Source: [RecycleMania 2009 Results](#)



# CASE STUDY

## Stephens College

Location: Columbia, Missouri / Enrollment: 1,114 / Type: Private

With a full time enrollment of just 1,114, Stephens College in Columbia, Missouri finished up its third year in RecycleMania with a big win in the Targeted Materials-Paper competition. Stephens finished with 40.87 pounds of paper per person. Indeed, Corey Clabaugh, Stephens' Foodservice Director and registered recycling coordinators considers Stephens "the little school that could."

Stephens's paper recycling success originated from a combination of its academic nature and the Stephens College Going Green program, otherwise known as SCG2. Three of the most popular majors on campus are fashion design, interior design, and theater. These majors

represent half of the student population and those students generate a lot of paper as they print and revise mockups and drawings. With the raw materials at hand, the SCG2 just had to maximize the recycling program to capture all the paper. Of course, Stephens had the success of its 2008 Targeted Materials-Paper win to draw upon. "The students have a sense of pride when they talk about RecycleMania. The award is displayed proudly... it has been used in tours for prospective students, updates for alumnae and more," Clabaugh observed.

RecycleMania is coordinated by Dining Services and the Student Government Association (SGA) at Stephens. Facilities employees actually collect the materials and record the volume for conversion into pounds. The SGA is tasked with promotions while Clabaugh and facilities handle the reporting. A successful promotion was a Spring Cleaning Day when students welcomed the change of seasons by purging and recycling old term papers, class notes and files.

**Source:** <http://www.recyclemaniacs.org/2009RMParticipantsProfile.htm>





# CASE STUDY

## Support and Resources for Campus Recycling

EPA Partnership Programs and ACUPCC Tangible Actions

As all American College and University President's (ACUPCC) signatories know, within two months of the implementation start date, a signatory is required to select a minimum of two of the seven Tangible Actions options identified in the ACUPCC Implementation Guide. Tangible Actions must be completed while schools develop their long-term climate action plans. EPA's programs can be of service in achieving the following Tangible Actions:

- Adopting an ENERGY STAR procurement policy;
- Beginning to purchase or produce at least 15% of the institution's electricity consumption from renewable sources within one year of signing the ACUPCC; and
- Participating in the Waste Minimization component of the national RecycleMania competition and adopting 3 or more measures to reduce waste.

### WasteWise & RecycleMania

ACUPCC signatories may choose to undertake three or more associated measures to reduce waste as part of Tangible Action 7 and EPA's WasteWise program can help. EPA offers colleges and universities tools and resources through its WasteWise College and University Campaign. By partnering with WasteWise, schools gain access to guidance and technical assistance focused on achieving the institution's waste reduction goals. Colleges and Universities that join WasteWise receive:

- Assistance with waste reduction efforts through access to WasteWise publications, tip sheets, case studies, and an account representative;
- Eligibility for the WasteWise College and University Award;
- Access to standardized goals and objectives for colleges and universities; and,
- Coordinated enrollment process with RecycleMania.

The Waste Minimization Tangible Action option also requires participation in the Waste Minimization component of RecycleMania. An annual competition, RecycleMania challenges colleges and universities to collect more recyclables than their counterparts over a 10-week period. The Waste Minimization component of RecycleMania rewards the institution that produces the least amount of municipal solid waste per person. RecycleMania is supported by EPA's WasteWise program.

To join the College and University Campaign, visit the WasteWise Web site at [www.epa.gov/wastewise](http://www.epa.gov/wastewise) or call (800) EPA-WISE (372-9473). For more information or to sign up for RecycleMania, visit [www.recyclemania.org](http://www.recyclemania.org).

**Source:** <http://www.aashe.org/blog/us-epa-partnership-programs-helping-support-acupcc-implementation>

# nine

**STEP**



## Recycling Education

On a college campus, education is never-ending! And the same holds true for recycling education. As graduating students leave, and new students come in, there will always be a need for expanding the knowledge and understanding about the virtues and needs of recycling on your particular campus.

As our communities head toward the growing trend of Zero Waste, more and more recycling opportunities will be popping up. Take advantage of this and use this to your campus' benefit. Continue to research the growing markets for your recovered materials and explore ways to recover even more.

### TIP:

Create outreach and awareness campaigns on your campus. Partner with student government, student activities, etc. to host paper recycling campaigns or contests. Tag on to other big campus activities that happen on a regular basis to promote and improve your recycling program.

Create fun, yet useful materials for the student body and administration. For example, create paper pads with some of your recovered office paper that has only been printed on one side and distribute across campus as a reminder to recover all office paper and print double-sided. Engage your campus print services and see if they will donate their time to create these pads of paper and print your specific recycling message on them.

***The recycling and reuse industry consists of approximately 56,000 establishments that employ over 1.1 million people, generate an annual payroll of nearly \$37 billion, and gross over \$236 billion in annual revenues.***

**Source:** [U.S. EPA](https://www.epa.gov/epaosr/recycling/industry)

The following tips are provided to help spur ideas on how to educate your student body about your recycling program, to make recycling main-stream on your campus, and to help grow the awareness of recycling in students' daily lives.

- Make sure your campus website has a page devoted to its environmental impact, or sustainability activities
- If you don't have a webpage devoted to recycling and other sustainability measures, form a team to ensure your school will set up a page for this purpose, and launch the page
- Appoint a webpage coordinator, either student or staff, to be the point person for all activity on the webpage
- Keep the webpage updated with your current school's sustainability activities
- Create an On-line resource guide or 'tool – kit' for students to take part in living sustainably while going to school
- Ensure that all students are aware of the recycling you are doing on the campus through a beginning of semester welcome packet, email announcement, or dorm flyers/ newsletters, etc. Get the word out in any way possible
- Create a monthly recycling column in your student newspaper that keeps the student body up to date on the latest recycling news for your campus
- Incorporate into freshman orientation: summarizing sustainability initiatives on campus, location of recycling bins, etc.
- Connect with residence hall advisors to educate their occupants about on-campus recycling
- Advocate for strong campus paper policies nationally through organizations and association like AASHE (Association for the Advancement of Sustainability in Higher Education) and SCUP (Society for College and University Planning).
- Outreach to and educate the faculty about your school's recycling efforts and programs, either in new faculty orientation, department email announcements, etc.

# ABOUT

## EARTH 911

Earth911 is an environmental services company that addresses solutions for products' end-of-life for both businesses and consumers. Earth911.com is your one-stop shop for all you need to know about reducing your impact, reusing what you've got and recycling your trash. Get involved in their world by checking in for daily news, reading weekly feature stories, surfing product channels and opting into their weekly emails.

In their recycling database, you can find over 100,000 recycling locations across the country. With information provided by local governments, industry insiders, organizations and everyday consumers, you can recycle hundreds of products from packing peanuts to computers.

Earth911 dreams at night about a world where everyone practices the three R's. Their search engine can help you do this, by making the trash in your hand another man's treasure. They hope to not only help you learn more about one of the easiest ways to make a real difference, but also get involved to impact your community and world.

Check out [Earth911.com](http://Earth911.com)!



# CASE STUDY

## University of Oregon

**Location:** Eugene, Oregon / **Enrollment:** 22,386 / **Type:** Public



The University of Oregon's Recycling Program, managed by the Facilities Services department, was created by students in 1990 and is now a national leader in college recycling efforts. In 2008-09 the Program recovered 1450 tons of recycling and composting, which translates to a 47% diversion rate. Additionally, the Program strives to reduce consumption through several campus projects and policies: Reusable Office Supply, Recycled Paper Policy, Comprehensive Campus Environmental Policy, Surplus Furniture exchange and other daily practices.

There are over 2,000 collection sites on campus, which collect a wide variety of items, including tennis ball cans and packaging peanuts, as well as traditional recyclables such as glass, plastic, white paper, and aluminum. The Program has a composting program for pre-consumer waste from the kitchens and for post consumer waste including paper food ware. The Program's Zero Waste Events Services capture compostables as well as recyclables reducing garbage at campus events to less than 25% of the total waste produced at these gatherings.

UO's six person staff, 45 student recyclers,

program volunteers and academic interns, work hard to promote a campus culture of conservation and recycling, resulting in a 5% reduction of campus waste between 2002 and 2004. The recycling program has engaged more than 1000 students since its inception and past student recyclers are now out in the world inspiring waste minimization and other environmental initiatives in their work and volunteer efforts. A critical component of the UO Campus Recycling Program is education and outreach. Additionally, the Program has a notable campus presence including a department listserv for campus environmental issues.

The UO recycling program helps make the connection between climate change and consumption/recycling through waste reduction educational campaigns. UO is a charter school in Recyclemania, a national competition to promote recycling on university and college campuses nationwide.

The recycling program offers tours for other schools interested in developing campus recycling programs and supports student recycling projects in Eugene-area schools.

**Source:** [www.uoregon.edu/~recycle](http://www.uoregon.edu/~recycle)





# CASE STUDY

## University of Pennsylvania

Location: Philadelphia, Pennsylvania / Enrollment: 20,000 / Type: Private

### Creating the Green Campus Partnership

The Green Campus Partnership is the umbrella organization that was formed in 2007 to address environmental sustainability planning and policy development at the University of Pennsylvania and to coordinate programs and initiatives for a more sustainable campus.

The Green Campus Partnership includes Facilities and Real Estate Services, Business Services, the Environmental Sustainability Advisory Committee (ESAC) as well as faculty and student groups, including the Penn Environmental Group (PEG).

### Planning for the Future

On September 15, 2009, the University unveiled its *Climate Action Plan*, a comprehensive strategy to address the significant reduction of the campus' greenhouse gas emissions. Fulfilling the *Climate Action Plan* requires the power of this partnership to build a culture of sustainability and shared responsibility between the institution and the individual to reduce Penn's carbon footprint.

As the Plan is implemented, the Penn community will gain new skills, knowledge, and appreciation for the value of a sustainable campus. Energy will be conserved, recycling expanded, emissions from commuting and air travel reduced, and buildings constructed and rehabilitated using today's best practices in sustainability.

The University of Pennsylvania will foster a culture of environmental engagement, integrating

sustainability into its ongoing mission of teaching, research, and service well into the future.

### Waste Minimization and Recycling at Penn

While waste may not be the largest contributor to Penn's carbon footprint, it is certainly the most visible. A 2008 waste audit revealed the potential to double the University's diversion rate of traditional recyclables by adopting campus standards for signage, receptacle design, and collection protocols. Promotional campaigns will inspire individuals to adopt the mantra of "reduce, re-use, recycle" across campus. The Climate Action Plan calls on the University to reduce its overall waste stream and increase its diversion rate of paper, cardboard, and commingled recyclables to 40 percent by 2014.

Implementing the *Climate Action Plan* will:

- Establish a comprehensive campus-wide waste reduction and recycling policy
- Enable proper waste reduction and recycling practices through education and communication efforts, events and competitions, and improved transparency of the campus collection system
- Expand the University's focus beyond recycling by championing green purchasing practices, composting efforts, local food investments, and source reduction initiatives

**Source:** <http://www.upenn.edu/sustainability/about.html>

# CLOSING

## Campuses Can Lead the Way

With climate catastrophes looming, along with an unstable global economy and inefficient and impractical waste infrastructure, the time is now to make systemic changes that route us down a more sustainable, and climate friendly path. Creating and implementing campus policies that support climate protection and reduced waste is a win-win situation for everyone involved, especially because it can also cut costs on campuses. When it comes to paper, the ideas in this guide will hopefully make the understanding and implementation of paper-related policies effective and efficient in supporting the above goals.

The RePaper Project sees a growing opportunity to make changes within the paper industry that will not only protect our fragile planetary ecosystems, but will also create social conditions that spur green technological innovations and support sustainable job

markets. To do this, we need the engagement of colleges and universities. If the majority of campuses implement the nine steps highlighted in this guide, and thereby increase paper efficiency, recover more paper for recycling, market that paper to our domestic mills, and purchase the best environmental paper, we can create a dramatic sustainable industry trend.

By no means are the nine steps outlined in this guide the only steps to achieve these overarching goals; however they do condense most of the critical avenues by which positive impact can be made. By adopting all or many of the steps outlined in this guide, you are making a massive impact, especially when your results multiply through the thousands of campuses across the country. Together, we can reimagine a new paper industry in the 21<sup>st</sup> century while creating a more sustainable climate on campus!

## TAKE THE CHALLENGE

### 75% BY 2015!

The RePaper Project is encouraging campuses across North America to increase their paper recovery rates in order to help reach the overall goal of 75% paper recovery by the year 2015. Because the U.S. is only recovering approximately 50% of office paper for recycling, we are prioritizing this paper sector to drastically drive up the paper recovery rates across the country. By pledging to increase your campus paper recovery rates, and prioritizing your office paper recovery, you will help achieve a goal that puts the U.S. on par with the world leaders on paper recovery, in turn protecting the climate, forests, and the overall environment.

To learn more and to sign the pledge, visit:  
[www.repaperproject.org](http://www.repaperproject.org)



# about

## National Wildlife Federation

[\[www.nwf.org/campus ecology/\]](http://www.nwf.org/campus ecology/)



National Wildlife Federation's Campus Ecology® program supports colleges and universities in their climate and sustainability work by providing resources such as a bimonthly e-newsletter, ClimateEdu, and webinar series, creating networking opportunities through climate action summits, and recognition opportunities through our national Chill Out: Campus Solutions to Global Warming competition and our fellowship grant program. Campus Ecology is also committed to advancing the green workforce for a clean energy future by working with community and technical colleges nationwide and providing the support and resources need to develop their green jobs training programs.

The Campus Ecology program has been working with individuals and campuses since 1989 to ensure a more sustainable future. And our campuses have been making a difference. We have the stories to prove it.

## RONA U

[\[www.recyclingorganizations.org/rona-u\]](http://www.recyclingorganizations.org/rona-u)



RONA-U is the collegiate group, backed the Recycling Organizations of North America. RONA has been created as an alliance of like-minded public and private organizations that share the common goal of sustaining and enhancing recycling and waste reduction in North America.

All agree that colleges and universities have unique, even decisive roles in recycling's long-term success. RONA-U helps schools: deliver valuable materials to market; purchase proper recycling equipment; develop skills among college recyclers with full access to information and opportunities for applied research, intern training, professional certification, and employment; and network with the recycling industry.

For more information about RONA-U, visit [www.recyclingorganizations.org](http://www.recyclingorganizations.org) or email [RONAUniversity@gmail.com](mailto:RONAUniversity@gmail.com)

## RePaper Project

[\[www.repaperproject.org\]](http://www.repaperproject.org)



With the urgency of climate change, a rapidly growing number of consumers and large institutional paper purchasers have committed to transition to higher content recycled paper products as part of the solution. Therefore it is critical to improve and increase paper collection and reinvigorate and expand North American recycled paper manufacturing.

Member organizations of the Environmental Paper Network have come together in a collaborative effort to address this challenge and build bridges with other stakeholders. The RePaper Project fosters dialogue, creates partnerships, and advances policy reforms that improve and increase paper recovery and the manufacturing of recycled paper.

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# DEFINITIONS

**Deinking** – The process by which ink is lifted off used paper, which is then broken back down into fibers to be recycled into new paper.

**Deinking Mill** – where recovered fiber is turned into clean recycled fiber for the use in manufacturing recycled paper. A high-grade deinking mill deinks Printing and Writing grades of paper. An integrated mill is where there are both a deinking pulp mill and a paper mill on the same site.

**Kraft Pulp** – also known as chemical pulp, or freesheet, is produced by a chemical process that separates wood fibers into cellulose, which can be used to make paper, and lignin, which is the structural part of wood that deteriorates the paper if not removed. The chemicals include caustic sodas, sodium hydroxide, sodium sulfide and usually chlorine compounds. The resulting pulp is very strong and is most commonly used to make office and printing papers, high-end coated papers, tissue, grocery bags and linerboard (the outer layers of corrugated boxes). Freesheet refers to pulp made from fibers from which the lignin portion of the timber structure was removed.

**Mechanical Pulp** – also called groundwood, is produced by mechanical grinding, pressure and other physical processes to separate the wood fibers. The separation process may also be enhanced with heat and chemicals. Most of the structure of the timber, including lignin, remains in the fiber, resulting in fiber that is shorter and weaker than kraft pulp, and that deteriorates more rapidly. Mechanical pulp is commonly used to make newsprint, inexpensive printing papers, and less expensive coated papers such as those used for many magazines and catalogs.

**OCC** – Old corrugated cartons recovered for sale to recycling mills.

**ONP** – Old newspapers and news inserts recovered for sale to recycling mills.

**Office Paper** - High grade papers such as copier paper, computer printout, and stationary almost entirely made of uncoated chemical pulp. Such paper is also generated in homes, schools, and elsewhere, along with offices.

**P&W** - Printing and Writing Paper. Suitable for printing, copying, and business purposes, writing, sketching, drawing, etc. except newsprint.

**Post-Consumer Fiber** – Fiber that has served its intended end use as a consumer item and is then diverted or recovered from the waste stream.

**Pre-Consumer Fiber** – Fiber that includes scraps created after the initial papermaking process in a paper mill, as well as those from printers and companies that convert paper into products such as boxes and envelopes. Most of the pre-consumer fiber categories have always been recycled at paper mills; in fact, many are called pulp substitutes.

**Virgin Fiber** – Fiber that has never been used before to make paper or other products. Virtually all virgin fiber in U.S. and Canadian papers comes from trees, although there is a very small amount that comes from agricultural crops such as kenaf, hemp and flax.

# NOTES & RESOURCES

## PAGE

### Summary – Green Your Campus through Smart Paper Policies

- 3 “50% office paper is recovered for recycling” – AF&PA ([www.paperrecycles.org](http://www.paperrecycles.org)) – 2006 Annual Recovered Paper Statistics
- 3 “...waste stream is often made up of 40-50% paper”... - NWF Paper and Wood Procurement Toolkit (<http://www.nwf.org/Global-Warming/Campus-solutions/~media/PDFs/Campus%20Ecology/NationalWildlifeFederationPaperandWoodProcurementToolkit1-20-10.ashx>)
- 3 State of the Campus Environment ([www.nwf.org/Global-Warming/Campus-Solutions/Resources/Reports/State-of-the-Campus-Environment-Report.aspx](http://www.nwf.org/Global-Warming/Campus-Solutions/Resources/Reports/State-of-the-Campus-Environment-Report.aspx)) – A National Report Card on Environmental Performance and Sustainability in Higher Education
- 3 What’s In Your Paper? ([www.whatsinyourpaper.org](http://www.whatsinyourpaper.org)) – A project of the Environmental Paper Network to help paper purchasers understand the environmental implications of their paper choices. The website hosts lists of paper, with their environmental attributes, to make sustainable purchasing easier.
- 3 “Printing and Writing papers only contain an average of 6% recycled content”... - Environmental Paper Network ([www.environmentalpaper.org](http://www.environmentalpaper.org)) Cradle to Cradle – The State of the Paper Industry: Monitoring the Indicators of Environmental Performance
- 4 Cradle to Cradle ([www.mcdonough.com/cradle\\_to\\_cradle.htm](http://www.mcdonough.com/cradle_to_cradle.htm)) - Remaking the way we make things.

### Step One – Paper Point Person

- 5 “Recycled paper industry creates 5 times as many jobs as the virgin paper industry.” - World Centric (<http://worldcentric.org/biocompostables/paper>)
- College Sustainability Report Card ([www.greenreportcard.org](http://www.greenreportcard.org)) – The Sustainability Endowment Institute publishes an annual report card on college campuses in all 50 states and Canada rating their sustainability programs.
- 5 NWF Campus Ecology, Campus Environment 2008, (<http://www.nwf.org/campusEcology/docs/CampusReportFinal.pdf>)
- 6 Dickinson College ([www.dickinson.edu/departments/sustainability/plan.html](http://www.dickinson.edu/departments/sustainability/plan.html))
- 7 Butler Community College (<http://www.butlercc.edu/>)

### Step Two – Paper Reduction Policy

- 8 “Just 10% of the world’s population (Western Europe and North America) consumes more than 50% of the world’s paper.” - Shrink ([Shrinkpaper.org](http://Shrinkpaper.org))
- 8 “...over a quarter of the content in our municipal landfills is paper”... - US EPA (<http://www.epa.gov/epawaste/nonhaz/municipal/pubs/msw07-rpt.pdf>) Municipal solid waste in the United States: 2007 facts and figures.



- 8 "...campus waste stream closer to 50%" – NWF (<http://www.nwf.org/Global-Warming/Campus-Solutions/~//media/PDFs/Campus%20Ecology/NationalWildlifeFederationPaperandWoodProcurementToolkit1-20-10.ashx>) Paper and Wood Procurement Toolkit
  - 9 FinePrint ([www.fineprint.com/](http://www.fineprint.com/)) - Reduce paper, ink and printer costs by at least 30% with this award-winning printer utility. Create booklets, save and compile print jobs from multiple sources and so much more!
  - 9 Greenprint ([www.greenprint.com](http://www.greenprint.com)) - For years, intelligent and visionary communicators have been demanding environmentally-friendly printing materials and procedures for their projects. Now it's time to go beyond recycled paper and print with real planetary responsibility.
  - 9 Green Fax ([www.greenfax.com](http://www.greenfax.com)) - Your own dedicated fax number linked to your email address, and the convenience of sending & receiving faxes by email; No busy signals - receive multiple faxes simultaneously; No hardware, software, or extra phone lines required; Lifetime storage and web access to faxes received; Secure inbound fax options, integration options for developers, and more
  - 9 Free PDF ([www.freepdf-xp.en.softnic.com/](http://www.freepdf-xp.en.softnic.com/)) – Free PDF XP offers a free alternative that does a good job of making PDF files complete with password protection. As a result, you can use the program to save files from a number of formats into printable format, including Word documents, Excel spreadsheets, pictures, or Web pages.
  - 9 Shrink ([www.shrinkpaper.org](http://www.shrinkpaper.org)) – A project devoted to encouraging more efficient ways of using paper.
  - 10 Carleton College (<http://apps.carleton.edu/campus/sustainability/>)
  - 11 University of Notre Dame (<http://green.nd.edu/>)
- California Integrated Waste Management Board ([www.ciwmb.ca.gov/BizWaste/FactSheets/Campaign.htm](http://www.ciwmb.ca.gov/BizWaste/FactSheets/Campaign.htm)) – tips for businesses to reduce paper consumption
- Catalog Choice ([www.cataloguechoice.com](http://www.cataloguechoice.com)) - The free service that lets you *reduce unwanted mail* and choose how you hear from brands.
- Environmental Paper Network ([www.environmentalpaper.org/documents/REDUCE-BUSINESS-GUIDE.pdf](http://www.environmentalpaper.org/documents/REDUCE-BUSINESS-GUIDE.pdf)) – a guide for businesses in reducing paper consumption.
- Environmental Paper Network – State of the Paper Industry Report ([www.environmentalpaper.org/stateofthepaperindustry/index.htm](http://www.environmentalpaper.org/stateofthepaperindustry/index.htm)) - Chapter 2 describes the importance of paper reduction strategies.
- Environmental Protection Agency ([www.epa.gov/osw/conserves/materials/paper/basics/index.htm](http://www.epa.gov/osw/conserves/materials/paper/basics/index.htm)) – paper basics and Waste Wise Program ([www.epa.gov/waste/partnerships/wastewise/index.htm](http://www.epa.gov/waste/partnerships/wastewise/index.htm))
- Natural Resources Defense Council ([www.nrdc.org/enterprise/greeningadvisor/pa-reducing.asp](http://www.nrdc.org/enterprise/greeningadvisor/pa-reducing.asp)) – tips for reducing paper use.
- Story of Stuff ([www.storyofstuff.com](http://www.storyofstuff.com)) – a moving documentary about our overconsumption habits

### Step Three – Recycled Paper Purchasing Policy

- 12 "World demand for paper is expected to rise 25% by the year 2020." - Confederation of European Industries ([www.cepi.org](http://www.cepi.org))
- 12 NWF Paper and Wood Procurement Toolkit (<http://www.nwf.org/Global-Warming/Campus-Solutions/~//media/PDFs/Campus%20Ecology/NationalWildlifeFederationPaperandWoodProcurementToolkit1-20-10.ashx>)
- 13 WhatsInYourPaper.org ([www.whatsinyourpaper.com/index.php?option=com\\_content&task=view&id=8&Itemid=9](http://www.whatsinyourpaper.com/index.php?option=com_content&task=view&id=8&Itemid=9)) – model paper purchasing policy

- 15** Association for the Advancement of Sustainability in Higher Education ([www.aashe.org](http://www.aashe.org)) - AASHE is an association of colleges and universities that are working to create a sustainable future.
- 16** Paper Steps ([www.environmentalpaper.org/documents/WIYP\\_thepapersteps\\_PrintFriendly.pdf](http://www.environmentalpaper.org/documents/WIYP_thepapersteps_PrintFriendly.pdf)) – Taking the steps to environmentally responsible paper.
- 18** Bates College ([www.bates.edu/sustainable-bates.xml](http://www.bates.edu/sustainable-bates.xml))
- 19** College of William and Mary (<http://www.wm.edu/sites/sustainability/?svr=web>)

Conservatree ([www.conservatree.org](http://www.conservatree.org)) – your one-stop source for information on environmental papers

Forest Stewardship Council ([www.fscus.org](http://www.fscus.org)) – FSC is a third-party certification system that sets forth principles, criteria, and standards that span economic, social, and environmental concerns. The FSC standards represent the world’s strongest system for guiding forest management toward sustainable outcomes. Like the forestry profession itself, the FSC system includes stakeholders with a diverse array of perspectives on what represents a well-managed and sustainable forest.

Recycled Products Cooperative ([www.recycledproducts.org/glossary1.html](http://www.recycledproducts.org/glossary1.html)) – helpful definitions about paper content and manufacturing processes from [Green America](http://www.greenamerica.org)

Responsible Purchasing Network ([www.newdream.org/work/rpn.php](http://www.newdream.org/work/rpn.php)) - promotes and practices responsible purchasing by identifying best practices, developing effective purchasing tools, educating the market. They have an on-line “Responsible Purchasing Guide to Copy Paper: ([www.responsiblepurchasing.org/purchasing\\_guides/copy\\_paper/products/?show=records&table=copy\\_paper](http://www.responsiblepurchasing.org/purchasing_guides/copy_paper/products/?show=records&table=copy_paper))

#### **Step Four –Paper Recovery Policy**

- 20** “Only 50% of office paper is recovered for recycling.” – American Forest & Paper Association ([www.afandpa.org](http://www.afandpa.org))
- 21** Eco-Cycle ([www.ecocycle.org](http://www.ecocycle.org)) - Eco-Cycle is one of the largest non-profit recyclers in the USA and has an international reputation as a pioneer and innovator in resource conservation.
- 22** Purdue University ([www.purdue.edu/buildings\\_grounds/recycling/dual\\_stream\\_recycling.htm](http://www.purdue.edu/buildings_grounds/recycling/dual_stream_recycling.htm))
- 23** Wallace Community College (<http://www.wallace.edu/>)

Discussion Paper: Reimagining Paper in the 21<sup>st</sup> Century ([www.environmentalpaper.org/repaperproject/documents/RePaperReimagineFinal.pdf](http://www.environmentalpaper.org/repaperproject/documents/RePaperReimagineFinal.pdf)) – A discussion paper for today’s leaders about how to transform North America’s paper industry into a sustainable and environmental industry.

Environmental Paper Network – State of the Paper Industry Report (<http://www.environmentalpaper.org/stateofthepaperindustry/index.htm>)

Keep America Beautiful ([www.kab.org](http://www.kab.org)) - Keep America Beautiful follows a practical approach that unites citizens, businesses and government to find solutions that advance our core issues of preventing litter, reducing waste, and beautifying communities.

Resource Recycling article (<http://www.environmentalpaper.org/repaperproject/bm~doc/resource-recycling-reimagine-article.pdf>) An article published in June 2009 about the state of paper recovery and recycling in the US.

#### **Step Five – Campus Climate Policy**

- 24** When paper decomposes in a landfill it releases methane, a climate warming gas 25 times more harmful than CO<sub>2</sub>. ([U.S. EPA](http://www.epa.gov))
- 25** Environmental Defense Paper Calculator 2.0 ([www.edf.org/papercalculator/](http://www.edf.org/papercalculator/))
- 26** ASU, Tempe ([www.purdue.edu/buildings\\_grounds/recycling/dual\\_stream\\_recycling.htm](http://www.purdue.edu/buildings_grounds/recycling/dual_stream_recycling.htm))
- 27** Bristol Community College ([www.bristol.mass.edu](http://www.bristol.mass.edu))

American College & University Presidents' Climate Commitment (ACUPCC) ([www.presidentsclimatecommitment.org/](http://www.presidentsclimatecommitment.org/)) - Colleges and universities must exercise leadership in their communities and throughout society by modeling ways to eliminate global warming emissions, and by providing the knowledge and the educated graduates to achieve climate neutrality. We hope you will join us in supporting the American College & University Presidents Climate Commitment.

Environmental Paper Network – Green Economy and Paper Industry Policy Memo – ([www.environmentalpaper.org/documents/Green%20Economy%20and%20Paper%20Industry%20\(1\)\(2\).pdf](http://www.environmentalpaper.org/documents/Green%20Economy%20and%20Paper%20Industry%20(1)(2).pdf))

National Recycling Coalition – Climate Change Initiative ([www.nrc-recycle.org/globalclimatechange.aspx](http://www.nrc-recycle.org/globalclimatechange.aspx))

National Wildlife Federation's Campus Ecology Program ([www.nwf.org/campusecology/](http://www.nwf.org/campusecology/)) - The program promotes climate leadership and sustainability among colleges and universities by providing resources and technical support, creating networking opportunities and organizing education events.

Society for College and University Planning ([www.scup.org](http://www.scup.org)) - SCUP, which was established in 1965, is a community of senior, high education leaders who are responsible for, or are involved in, the integration of planning on their campuses and for the professionals who support them. Members look to SCUP to find ways to successfully integrate the institution's mission into their academic plan, and then seek to integrate all other kinds of planning on campus in support of the academic plan.

Stop Trashing the Climate ([www.stoptrashingthecclimate.org/](http://www.stoptrashingthecclimate.org/)) - provides compelling evidence that preventing waste and expanding reuse, recycling, and composting programs — that is, aiming for zero waste — is one of the fastest, cheapest, and most effective strategies available for combating climate change.

University Leaders for a Sustainable Future ([www.ulsf.org](http://www.ulsf.org)) The mission of ULSF is to support sustainability as a critical focus of teaching, research, operations and outreach at colleges and universities worldwide through publications, research, and assessment. ULSF also serves as the Secretariat for signatories of the Talloires Declaration, a ten-point action plan committing institutions to sustainability and environmental literacy in teaching and practice. Over 350 university presidents and chancellors in more than 40 countries have signed the Declaration.

### Step Six – Marketing Recovered Paper

- 28 World demand for deinked fiber will increase by 2 million tons each year for the next decade. Source: Forest Trends ([www.forest-trends.org](http://www.forest-trends.org))
- 29 Forest Justice Campaign ([www.forestjustice.org](http://www.forestjustice.org)) – The Forest Justice campaign is working with young people to have an impact on reducing tropical deforestation at the local, national and international level.
- 30 Stanford University (<http://sustainablestanford.stanford.edu/recycling>)
- 31 University of Colorado (<http://recycling.colorado.edu/>)

### Step Seven – Closing the Loop

- 32 “Making paper out of paper uses 43% less total energy than making paper out of trees.” – Paper Calculator ([www.PaperCalculator.org](http://www.PaperCalculator.org))
- 33 Environmental Paper Network, State of the Paper Industry Report ([www.environmentalpaper.com/documents/StateOfPaperIndSm.pdf](http://www.environmentalpaper.com/documents/StateOfPaperIndSm.pdf)) – page 16 lists the high-grade deinking mills in North America
- 34 Boise Paper – local school paper recycling ([www.clarkecountymdemocrat.com/news/2008-04-17/editorial/023.html](http://www.clarkecountymdemocrat.com/news/2008-04-17/editorial/023.html))

### Step Eight – RecycleMania!

- 35 “Half of the trees cut commercially around the world end up in paper products.” Shrink ([www.shrinkpaper.org](http://www.shrinkpaper.org))

- 35 RecycleMania ([www.recyclemania.org/](http://www.recyclemania.org/)) - RecycleMania is a friendly competition and benchmarking tool for college and university recycling programs to promote waste reduction activities to their campus communities.
- 36 Stephens College ([www.stephens.edu](http://www.stephens.edu))
- 37 Support and resources for campus recycling ([www.aashe.org/blog/us-epa-partnership-programs-helping-support-acupcc-implementation](http://www.aashe.org/blog/us-epa-partnership-programs-helping-support-acupcc-implementation))

### Step Nine – Recycling Education

- 38 “The recycling and reuse industry consists of approximately 56,000 establishments that employ over 1.1 million people, generate an annual payroll of nearly \$37 billion, and gross over \$236 billion in annual revenues.” US EPA – ([www.epa.gov/epawaste/conserve/rrr/rmd/rei-rw/result.htm](http://www.epa.gov/epawaste/conserve/rrr/rmd/rei-rw/result.htm))
- 38 “...growing trend of Zero Waste...” - Zero Waste is a new way of looking at our waste stream. Instead of seeing used materials as garbage in need of disposal, discards are seen as valuable resources. A pile of “trash” represents jobs, financial opportunity, and raw material for new products. (Source: [www.eco-cycle.org/zero/index.cfm](http://www.eco-cycle.org/zero/index.cfm))
- 39 Earth911 ([earth911.com](http://earth911.com)) - Earth911 is an environmental services company that addresses solutions for products’ end-of-life for both businesses and consumers.
- 40 University of Oregon ([www.uoregon.edu/~recycle/site\\_map.htm](http://www.uoregon.edu/~recycle/site_map.htm))
- 41 University of Pennsylvania (<http://www.upenn.edu/sustainability/>)

Eco-cycle ([www.eco-cycle.org](http://www.eco-cycle.org)) - Eco-Cycle is one of the largest non-profit recyclers in the USA and has an international reputation as a pioneer and innovator in resource conservation.

GrassRoots Recycling Network ([www.grrn.org](http://www.grrn.org)) - GRRN has a vision of the world where waste is not waste it is a resource. We are the voice of all those who recycle and want to waste less and do more. GRRN is also the home to a list of all the state recycling organizations: ([www.grrn.org/resources/sros.html](http://www.grrn.org/resources/sros.html)).

Sustainable Endowments Institute ([www.greenreportcard.org/about/sustainable-endowments-institute](http://www.greenreportcard.org/about/sustainable-endowments-institute))  
 - The Institute is a nonprofit organization engaged in research and education to advance sustainability in campus operations and endowment practices. The [GreenReportCard.org](http://GreenReportCard.org) website and the College Sustainability Report Card are both initiatives of the Sustainable Endowments Institute.

### Closing – Campuses Can Lead the Way

- 42 RePaper Challenge Campaign ([www.repaperproject.org](http://www.repaperproject.org)) – A campaign of the RePaper Project to increase paper recovery for recycling to 75% by the year 2015.